WHAT IS CLAIMED IS:

1. A header decompression apparatus for decompressing a compressed header of a packet for transmission by referring to reference information being the same as reference information

5   referred to for header compression by a transmitting side, said apparatus comprising:

a packet receiver for receiving the packet from said transmitting side;

a reference information manager for storing and

10   managing said reference information;

a header decompressor, provided with the received packet, for carrying out header decompression by referring to the reference information stored in said reference information manager;

15   an error detector for detecting an error in the packet including the decompressed header;

a counter/storage for counting the number of errors detected by said error detector and storing a relationship between the number of error packets and the number of error free

20   packets; and

an update request unit for transmitting, to said transmitting side, an update request for requesting update of said reference information, when determining, based on the relationship of the packet number stored by said counter/storage,

25   that the reference information stored in said reference

information manager should be updated.

2. The header decompression apparatus according to claim 1, wherein

said counter/storage has a predetermined value W stored

5 therein, and counts and stores the number of packets R having an error detected by said error detector from among the last W packets previously received by said packet receiver, and

said update request unit determines, based on W and R stored by said counter/storage, that the reference information

10 stored in said reference information manager should be updated when R is larger than a predetermined value.

3. The header decompression apparatus according to claim 2, wherein

15 said update request unit determines that the reference information stored in said reference information manager should be updated when R is larger than a predetermined value which is determined based⁻on W.

20 4. A header decompression method for decompressing a compressed header of a packet for transmission by referring to reference information that is the same as reference information referred to for header compression by a transmitting side, said method comprising:

25 a packet receiving step of receiving the packet from

said transmitting side; a header decompressing step, provided with the received packet, of carrying out header decompression by referring to the reference information stored in said reference information stored;

5   an error detecting step of detecting an error in the packet including the decompressed header;

a counting /storing step of counting the number of errors detected in said error detecting step and storing a relationship between the number of error packets and the number 10   of error free packets; and

an update requesting step of transmitting, to said transmitting side, an update request for requesting update of said reference information, when determining, based on the relationship of the packet number stored in said counting/storing 15   step, that the stored reference information should be updated.

5. The header decompression method according to claim 4, wherein

in said counting/storing step, a predetermined value 20   W is used to count and store the number of packets R having an error detected in said error detecting step from among the last W packets previously received in said packet receiving step, and

in said update requesting step, it is determined, based on W and R stored in said counting/storing step, that the stored 25   reference information should be updated when R is larger than a

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predetermined value.

6. The header decompression apparatus according to claim 5, wherein

in said update requesting step, it is determined that the stored reference information should be updated when R is larger than a predetermined value which is determined based on W.

7. A computer-readable recording medium with a program recorded therein, the program being executed in a computer system for carrying out header decompression of decompressing a compressed header of a packet for transmission by referring to reference information that is the same as reference information referred to for header compression by a transmitting side, said program comprising:

a packet receiving step of receiving the packet from said transmitting side;

a header decompressing step, provided with the received packet, of carrying out header decompression by referring to the reference information stored in said reference information stored;

an error detecting step of detecting an error in the packet including the decompressed header;

a counting /storing step of counting the number of

errors detected in said error detecting step and storing a relationship between the number of error packets and the number of error free packets; and

5 an update requesting step of transmitting, to said transmitting side, an update request for requesting update of said reference information, when determining, based on the relationship of the packet number stored in said counting/storing step, that the stored reference information should be updated.

10 8. A computer-readable recording medium according to claim 7, wherein

in said counting/storing step, a predetermined value W is used to count and store the number of packets R having an error detected in said error detecting step from among the last 15 W packets previously received in said packet receiving step, and

in said update requesting step, it is determined, based on W and R stored in said counting/storing step, that the stored reference information should be updated when R is larger than a predetermined value.

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9. The header decompression apparatus according to claim 8, wherein

in said update requesting step, it is determined that the stored reference information should be updated when R is 25 larger than a predetermined value which is determined based on

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W.

10. A program executed In a computer system for carrying out header decompression of decompressing a compressed header of a packet for transmission by referring to reference information the same as reference information referred to for header compression by a transmitting side, said program comprising:

a packet receiving step of receiving the packet from said transmitting side;

a header decompressing step, provided with the received packet, of carrying out header decompression by referring to the reference information stored in said reference information stored;

an error detecting step of detecting an error in the packet including the decompressed header;

a counting /storing step of counting the number of errors detected in said error detecting step and storing a relationship between the number of error packets and the number of error free packets; and

an update requesting step of transmitting, to said transmitting side, an update request for requesting update of said reference information, when determining, based on the relationship of the packet number stored in said counting/storing step, that the stored reference information should be updated.

11. The program according to claim 10, wherein,

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in said counting/storing step, a predetermined value
W is used to count and store the number of packets R having an
error detected in said error detecting step from among the last
W packets previously received in said packet receiving step, and

5   in said update requesting step, it is determined, based
on W and R stored in said counting/storing step. that the stored
reference information should be updated when R is larger than a
predetermined value.

10   12. The header decompression apparatus according to
claim 11, wherein

        in said update requesting step, it is determined that
the stored reference information should be updated when R is
larger than a predetermined value which is determined based on
15   W.